COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY
FIRST SET OF INFORMATION REQUESTS
New England Power Company D/B/A National Grid, D.T.E. 06-37
Date Issued: July 20, 2006

General

DTE-G-1 Please indicate changes, if any, in the zoning ordinances of Uxbridge and Northbridge since authorization, by Order D.P.U. 18685, of the Company's 1978 petition to install a similar transmission tap line (now constructed) to the Whitins Pond #320 ("Whitins Pond") substation along the same right-of-way ("ROW") as that of the instant case.

DTE-G-2 Please refer to the Testimony of Roger Cox at 26. Please identify on a copy of the exhibit accompanying Testimony of David Beron, and labeled by the Company Exh. DJB-1, the exact location of the large residential area near Whitins Pond substation built on former farm land over the last 10 years.

DTE-G-3 Please refer to the Testimony of Roger Cox at 25. Please discuss whether locating a new Northbridge/Sutton substation behind National Grid's new Central Distribution Center and immediately adjacent to existing transmission lines, in accordance with Plan 2, might reduce (a) transmission connection costs and (b) environmental impacts of creating or working in a transmission ROW.

DTE-G-4 Please indicate the NEPOOL or ISO-New England review procedures that have been or will be undertaken with respect to the project. For each review, indicate the scope, status, results to date, and remaining time-frame of the review.

DTE-G-5 Did the Company consider line loss differences between the plans? If so, please indicate if differences in electrical losses are expected between the proposed plan and the alternative plan.

DTE-G-6 Please cite and discuss factors that relate the historical and forecasted load trends for the area, such as changes in population, and land use and development. Please discuss any expected shifts in historical trends that underlie forecasted load.

DTE-G-7 Please refer to the Testimony of Roger Cox, at 7-8. Please provide detailed information with respect to the estimated costs of construction of a new National Grid Regional Distribution Center on Main Street, Northbridge as an alternative remedy to distribution system problems described by Mr. Cox in his testimony. In particular, please specify how such construction might exceed costs of the proposed project by more than $1,000,000.

Need

DTE-N-1 Please list and distinguish between local and regional transmission system causes of the outages noted in the Petition at 2(12).

DTE-N-2 Please refer to the Testimony of David Beron att. 4, at 4-6. Do specific feeder arrangements account for the different growth rates between the Q143 and proposed R144 tap lines? Please discuss other factors, if any, accounting for differential growth. Under what conditions, if any, might the Q143 line share of load increase more than indicated from 2006 to 2017, assuming construction of the proposed project?

DTE-N-3 Please refer to the Testimony of Roger Cox at 3. Please provide actual and normalized peak load by year from 1996 to 2004. Please indicate more specifically for the 1996 through 2004 time-frame the sub-area location and extent of differences between predicted and actual load growth.

DTE-N-4 Please refer to the Testimony of Roger Cox at 2-3. Please discuss whether the Company could consider expanding the Uxbridge #321 ("Uxbridge") or Depot Street #35 ("Depot Street") substation, in lieu of the proposed project in order to address system distribution capacity problems identified in the 1996 study area.

DTE-N-5 Please refer to the Testimony of Roger Cox at 3-4; att. 1, at 10-11. Please indicate the locations (*i.e.*, identify the transmission lines or transformers involved) of the thermal overload problems, and clarify whether each is a normal or a contingency overload problem.

DTE-N-6 Please refer to the Testimony of Roger Cox at 4. Please provide information as to the location and extent or outage conditions occurring in 2005 in the five town area served by the Whitins Pond #320 substation that contributed to that area's experiencing some of the poorest reliability in Massachusetts. Summarize by feeder or other system level the extent of any exceedences of applicable reliability criteria, including the 20 MWHr limit, the CAIDI standard and the SAIFI standard.

DTE-N-7 Please refer to the Testimony of Roger Cox at 7. Please describe in more detail the distribution switching scheme (in one area) that would automatically isolate and restore some customers in less than one minute in the event of a distribution problem. How would increased distribution capacity allow the Company to install such a switching scheme and where would its installation likely occur? Which customers would benefit from quick restoration of power in the event of a distribution problem as a result of installation of the distribution switching scheme?

DTE-N-8 Please refer to the Testimony of Roger Cox at 6, 7-8. Mr. Cox states that the project will support feeders to supply new development "...expected to follow the completion of the Route 146 connection to the Massachusetts Turnpike and Interstate Route 290...." Please explain why a National Grid Regional Distribution Center constructed on Main Street, Northbridge, adjacent to State Route 146 and the Q-143/R-144 transmission ROW would be further than the proposed project from the load center to be served.

DTE-N-9 Please refer to the Testimony of Roger Cox at 8. Please identify possible "alternate improvements" that the Company might pursue to address reliability this year. Are there no such options that might prevent electrical loads at the Whitins Pond #320 substation from exceeding National Grid Design Criteria next summer (2007)?

DTE-N-10 Please refer to the Testimony of Roger Cox att. 1, at 6, 7. Please discuss why greater expansion of the Uxbridge substation rather than other Company facilities would not best serve anticipated load growth in Douglas, Sutton, Northbridge, Uxbridge, Millville, Blackstone, Mendon and Bellingham. Please also comment on the ability of an expansion of the Uxbridge substation to serve projected load growth for the Uxbridge Industrial Park at Routes 16 and 146.

DTE-N-11 Please refer to the Testimony of Roger Cox att. 1, at 10. Please indicate whether a new feeder from Uxbridge substation has been constructed to relieve 321 W1 and 320 W2 supplies from Uxbridge and Whitins Pond as recommended. in Section 5.2 of the Company's December 2005 Uxbridge/Milford Area Supply and Distribution Study. If not, why not? Did extension of the feeder into Main Street, Whitinsville and Sutton area meet this need?

DTE-N-12 Please refer to the Testimony of Roger Cox att. 1, at 10. Please indicate whether it is possible to address, independent of other distribution system concerns, the supply problems in Douglas arising from overages on the 320 W2 and 321W4 feeders. If so, please discuss whether, and if so, how, addressing these overages directly would affect reliability needs and improvement plans for the overall distribution system.

DTE-N-13 Please refer to the Testimony of Roger Cox att. 1, at 12. Please explain the extent of reduction or loss of rated capacity for several feeders in Douglas and Whitins Pond. How does de-rating supply transformers at Uxbridge and Whitins Pond enable the Company to reserve capacity for the largest contingency auto-transfer?

DTE-N-14 Please refer to the Testimony of Roger Cox att. 1, at 12. Please provide a copy of the referenced 2005 agreement between Massachusetts Electric Company ("MECO") and regulators. Please clarify the facilities work at the Whitins Pond substation that must be completed by the Company before October 31, 2006 to meet the Company's obligations under the referenced 2005 agreement. What happens if (1) the Company does not meet its agreed compilation of work and (2) a new feeder to Sutton and Douglas cannot be energized as anticipated?

DTE-N-15 Please refer to the Testimony of Roger Cox att. 1, at 12. Please indicate the conditions under which " reserve capacity requirements on Whitins Pond and Uxbridge feeders, and transformers for Douglas feeder auto-transfers, will not leave enough area capacity to make Uxbridge substation firm via load transfers." Please indicate the nature and length of consequences that these conditions might trigger.

DTE-N-16 Please refer to the Testimony of Roger Cox att. 1, at 23. Please elaborate on the Company's statement that "[a]t historic growth levels, neither Plan 1 nor Plan 2 is sufficient."

DTE-N-17 Please refer to the Testimony of Roger Cox att. 1, at 23. Please discuss whether construction of a second transformer at Uxbridge substation under Plan 2 would result in greater system reliability compared to Plan 1.

DTE-N-18 Please refer to the Testimony of Roger Cox att. 1, at 24, bottom of page. Are the "plans involving substations located several miles north of Whitins Pond" similar to Plan 2?

DTE-N-19 Please refer to the Testimony of Roger Cox att. 1, at 25. Please discuss whether and, if so, how the proposed project addresses the Company's anticipation that load growth in the Uxbridge/Milford area will likely be in excess of that forecasted.

DTE-N-20 Please refer to the Testimony of Roger Cox att. 1, at 25, 27, Table 5. For selected feeders and utilization levels in Table 5, please provide some examples of the years in which utilization levels would be reached, adjusted to reflect load growth, as anticipated by the Company, in excess of the forecasted amount.

DTE-N-21 Please refer to the Testimony of Roger Cox att. 1, at 24. Please provide an explanation and supporting information for the calculation of MWHrs of outage shown in the second, fifth and sixth rows of Table 4. If available, provide a summary of the outage calculations in the second row by feeder.

DTE-N-22 Please refer to the Testimony of Mark Stevens at 6. Please indicate what is presently done by the Company to ensure reliability of service in the event of a planned or unplanned outage involving its Q-143N transmission line.

DTE-N-23 Please refer to the Testimony of Mark Stevens att. 1, at 10. Please indicate the improvement to reliability provided by replacing the sacrificial air break on the high side of the existing T1 transformer at Whitins Pond substation with a circuit switcher.

DTE-N-24 Please refer to the Testimony of Mark Stevens att. 1, at 22-23. Please provide additional detail with respect to the "twice the forecast rate" and "recent historical growth rate" plans referenced by the Company and their relationship to the proposed project. Are these plans affected by, and do they assume, construction of the Company's proposed project? Might they be constructed instead of the Company's proposed project?

DTE-N-25 Please discuss in detail demand side management opportunities that the Company has pursued, or considered, holding demand below the maximum rating of the Company's existing cable.

DTE-N-26 Please discuss whether and to what extent distributed generation and/or targeted DSM might alleviate current and forecasted peak loading in the area served by the Whitins Pond substation. Has targeted DSM been implemented there? If so, please report on the results.

DTE-N-27 How would the proposed transmission line and substation change supply capability and equipment loadings in the area? Could, for example, new large business customers be supplied in the area with the upgrade but not without it?

Environmental

DTE-E-1 Please list the local, state, and federal approvals that the proposed transmission line will require and indicate the status of each approval.

DTE-E-2 Please refer to the Testimony of David Beron at 4. Please indicate, relative to the existing and proposed 115kV tap lines in the instant case, where the Company expects to construct distribution lines in the ROW between the Q-143 transmission line and the Whitins Pond substation. Please discuss any additional clearing of vegetation or widening of the ROW that may be necessary.

DTE-E-3 Please refer to the Testimony of David Beron at 8. Please detail the National Electrical Safety Code requirements for clearance and management of vegetation that are the Company's stated basis for preferring to construct the proposed 115 kV line to the west of its existing transmission tap line between the Whitins Pond substation and the Company's main transmission line corridor in Uxbridge.

DTE-E-4 Please refer to the Testimony of F. Paul Richards at 4. Please discuss, and illustrate as applicable, any modifications in construction of the proposed project in the vicinity of the Whitins Pond substation and the west edge of the Company's ROW that the Company may propose or be considering in order to save trees or wooded areas screening nearby residences.

DTE-E-5 Please refer to the Testimony of F. Paul Richards at 4. Please provide information as to specific herbicides the Company plans to use to control vegetation in its ROW in the vicinity of the proposed project during and after construction. Please also specify whether the company anticipates that application of any substance(s) used to control vegetation would be primarily or exclusively to stump or foliage, and whether selection or application of herbicides is different in sensitive areas such as wetlands or near residences.

DTE-E-6 Please provide estimates of how many trees will be cut down and how many trees will be topped along the route. Please include an estimate of the number of trees to be cut down and topped between the western edge of the Company's ROW and Whitins Pond substation.

DTE-E-7 Please describe the Company's current plans to restore or install screening along the edge of the ROW near residences and at road crossings.

DTE-E-8 Please compare the area or number of trees expected to be cut or topped along the proposed route versus the alternative alignment.

DTE-E-9 Please discuss the Company's plans for re-vegetation of its ROW upon completion of its proposed project. In your discussion please address the time-frame for re-vegetation and quantitative indicators of successful re-vegetation, such as the percentage mix, area and height of vegetation.

DTE-E-10 Please describe any and all measures that the Company anticipates implementing to ensure traffic safety during construction of the proposed project. Please include in your description measures anticipated to ensure safe passage of emergency response vehicles.

DTE-E-11 Please refer to the Testimony of David Beron at 6. Please indicate whether National Grid has modified its construction standards in recent years to address safety, maintenance, or reliability issues, and if so, whether the design of the proposed 115 kV transmission tap line reflects those changes. Please indicate whether the Company is aware of any recent changes applicable to government safety, installation, maintenance, or reliability standards applicable to the proposed project. If so, please provide specifics.

DTE-E-12 Please refer to the Testimony of David Beron at 6. Please discuss any long-term environmental or other advantages or disadvantages that might result from running both the existing and proposed 115 kV tap lines on the same supporting structures (of a suitable type).

DTE-E-13 How do modeled electromagnetic field ("EMF") levels from the Company's transmission lines compare to EMF levels from local distribution lines at the ROW and at road crossings? What cumulative EMF levels would be expected at the Whitins Pond substation at the closest point to the most proximate residence? Please indicate whether the Company expects to minimize magnetic field level contributions from the two parallel distribution circuits, to be installed on the Company's ROW, by selecting a particular arrangement of phased conductors.

DTE-E-14 Does the Company anticipate that the proposed construction might affect groundwater? How does the Company anticipate ensuring that contaminants are not released into groundwater during construction of the proposed project? Please discuss.

DTE-E-15 Please provide and compare the area of wetland zone disturbance and buffer zone disturbance for the proposed route and alternative alignment.

DTE-E-16 Please indicate any special safety precautions the Company anticipates taking to prevent malicious or accidental trespass during construction of the proposed project.

DTE-E-17 Please indicate whether the Company anticipates curb-to-curb re-paving of streets and reinstallation of any sidewalks affected by construction for the proposed project.

DTE-E-18 Please note any re-routing of traffic anticipated in conjunction with construction of the proposed project.

DTE-E-19 Please describe any and all measures that the Company expects to put into place to ensure traffic safety during construction of the proposed project. Please include in your description measures anticipated to ensure safe passage of emergency response vehicles.

DTE-E-20 Please discuss reasons, if any, that construction of the proposed project might begin before 7:00 a.m. or end after 5:00 p.m. Please discuss reasons, if any, that construction of the proposed project might occur on Saturdays or Sundays, and the likely hours of such weekend construction.

DTE-E-21 Please indicate whether the Company would be willing to restrict or modify hours of construction on the proposed project in response to a request for same from the owner of an adjacent residence or business.